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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,683	03/19/2004	Matthias Niethammer	P04,008.2	8170

7590
SCHIFF HARDIN LLP
Patent Department
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EXAMINER

FISHER, PAUL R

ART UNIT	PAPER NUMBER
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3689

MAIL DATE	DELIVERY MODE
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04/12/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/804,683

Applicant(s)

NIETHAMMER, MATTHIAS

Examiner

PAUL R. FISHER

Art Unit

3689

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Request for Continued Examination submitted on February 16, 2010 has been acknowledged. Claim 2 has been canceled. Claims 1 and 3-15 are currently pending and have been considered below.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 16, 2010 has been entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1, 8, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi (US 2003/0050792), in view of Lisa Fratt: "What's Up with Contrast Injectors?" (February 2003) hereafter Fratt, further in view of Fichtner et al. (US 6,360,362 B1) hereafter Fichtner.**

As per claim 1, Shiraishi discloses a medical system (Page 1, Paragraph 2; discloses that the apparatus can be used in a medical system) comprising:

an installed computed tomography apparatus comprising a plurality of installation components that permanently install said computed tomography apparatus at an installation site, and a control unit that operates the computed tomography apparatus (Figure 2, paragraphs 30-34; discloses that the medical imaging apparatus or computer comprises a plurality of permanently installed components where permanently installed refers to a component that is not easily removed, these components are RAM, CPU, ROM, HDD or hard drive with corresponding software. These components include a control unit which as described in the applicant's specification page 3, line 17, is the unit which allows communication with the remote location for servicing and maintenance, in this case the control unit is a combination of the software located on the computer and the network interface that allows the computer to communicate with the remote location, Page 2, paragraph [0030]; discloses that the gantry is one unit attached to an X-ray device which the Examiner is construing to be a mounted imaging scanner the Gantry is also connected to an operating console. Page 2, paragraph [0027]; discloses that only example of the system includes a CT system or Computed Tomography, but could also refer to a MRI system or other products or systems);

a remote access interface connected to the control unit configured to allow the control unit to communicate with a remote location for remote servicing of the computed tomography apparatus (Fig. 2, character 10, paragraph 34; discloses the remote access interface. Page 2, paragraph [0018]; discloses that the purposes of this is to allow for

remote site management capable of providing timely and efficient maintenance services even when a system includes machines that are not covered by maintenance services);

a device separate from the control unit configured for temporary connection to said control unit for temporary operation in combination with said installed computed tomography apparatus, said device comprising an interface (Fig. 1, character 103, paragraph 30; discloses the external device in this example case it is a gantry apparatus. Figure 2; discloses that the gantry apparatus has an interface to connect with the imaging apparatus. Page 3, paragraphs 41 and 42; discloses that the gantry apparatus is shown in the reference to be a separate device apart from the computer or operation console and can even be purchased from a separate vendor. From this it is shown that the external device or gantry apparatus is not one of the core components of the computer, and is considered to be a completely separate device, but is still usable in combination with the installed medical imaging apparatus since it can be connected to the computer and used in conjunction with the computer. This connection is considered to be temporary since it can be disconnected and reconnected when the system in upgraded);

said control unit being configured to place said device in communication with said remote access interface, via said device interface, to allow remote servicing of said device from said remote location through said control unit of said computed tomography apparatus via said remote access interface and said device interface, only while said device is connected to said control unit (Fig. 2, characters 9 and 10; disclose the router

or communication channel that allows communication from the external device and the remote location).

While Shiraishi discloses a CT system it is not explicit as to what additional components can be included in such a system such as a power contrast agent injector or similar peripheral device that will not be used every single time. Further while it does disclose allowing for the updating of the various devices it fails to disclose updating known peripheral devices such as a power contrast agent injector.

Fratt, which talks about contrast injectors, teaches that the external device used in a computed tomography system can be a power contrast agent injector (Paragraph 4, heading Fact 3; teaches that the market for CT power injectors is growing due to new applications and procedures such as CT angiography, cardiac CT and perfusion imaging and that the faster the scanners are the more precise the delivery of contrast agent must be, from this it would have been obvious to exchange the external device used in the system provided by Shiraishi with a power contrast agent injector since it is one of many devices that could be used in conjunction with this system and would have to be monitored to ensure proper care and maintenance is observed. As stated above the system of Shiraishi is merely an example of one type of system with basic components since the goal of Shiraishi is to "provide a remote site management system capable of providing timely and efficient maintenance services even when a system includes machines that are not covered by maintenance services" it would have been obvious to extend the coverage and services to known CT devices such as a power contrast agent injector).

Therefore from this teaching of Fratt, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote servicing of CT equipment provided by Shiraishi, with the use of power contrast agent injector in a CT system taught by Fratt, for the purpose of providing the users of the system with the newest and most up to date equipment. Shiraishi also mentions that the system can comprise a plurality of machines and uses the gantry apparatus as an example, it would have been obvious to exchange the external device used in the system provided by Shiraishi with a power contrast agent injector since it is one of many devices that could be used in conjunction with this system and would have to be monitored to ensure proper care and maintenance is observed.

The combination of Shiraishi and Fratt fails to explicitly disclose updating known peripheral devices.

Fichtner, which talks about automatic update of camera firmware, teaches updating the firmware of device and a host system (Col. 2, lines 24-39; teach that firmware is updated automatically upon connecting the device to the host system. In turn this simplifies operation for the user while ensuring compatibility between the device and host software, the intent is to provide "bug" fixes, enhancements to algorithms, and update protocols. Col. 1, lines 38-43; teaches that it is old and well known to update firmware on devices manually, however this is inconvenient and may lead to errors caused by incompatible versions of firmware and host system software. It would have been obvious to include this automatic update of peripheral devices such as imaging devices, in the combination of Shiraishi and Fratt, since while Shiraishi fails to

explicitly disclose a power contrast agent, in view of Fratt it would have been obvious that a power contrast agent be included in the CT system of Shiraishi and updating these devices would be crucial to maintain proper operation. As stated in Fichtner by doing this automatically through the host device it ensures that the versions of the software are compatible and work properly together).

Therefore from this teaching of Fichtner, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote servicing of CT equipment provided by the combination of Shiraishi and Fratt, with the use of update of peripheral devices as taught by Fichtner, for the purpose of ensuring the compatibility of the host system and the peripheral devices. As stated in Fichtner by doing this automatically through the host device it ensures that the versions of the software are compatible and work properly together.

As per claim 8, Shiraishi discloses a method for remotely servicing an external device using in combination with an installed computed tomography apparatus that comprises a plurality of components that permanently install said computed tomography apparatus at an installation site, and a control unit that operates the computed tomography apparatus (Paragraphs 1-4; disclose that the invention relates to a medical system and services external devices Figure 2, paragraphs 30-34; discloses that the medical imaging apparatus or computer comprises a plurality of permanently installed components where permanently installed refers to a component that is not easily removed, these components are RAM, CPU, ROM, HDD or hard drive with corresponding software. These components include a control unit which as described in

the applicant's specification page 3, line 17, is the unit which allows communication with the remote location for servicing and maintenance, in this case the control unit is a combination of the software located on the computer and the network interface that allows the computer to communicate with the remote location. Fig. 1, character 103, paragraph 30; discloses the external device in this example case it is a gantry apparatus. Figure 2; discloses that the gantry apparatus has an interface to connect with the imaging apparatus. Page 3, paragraph 42; discloses that the gantry apparatus is shown in the reference to be a separate device apart from the computer or operation console and can even be purchased from a separate vendor. From this it is shown that the external device or gantry apparatus is not one of the core components of the computer, and is considered to be a completely separate device, but is still usable in combination with the installed medical imaging apparatus since it can be connected to the computer and used in conjunction with the computer. Page 2, paragraph [0030]; discloses that the gantry is one unit attached to an X-ray device which the Examiner is construing to be a mounted imaging scanner the Gantry is also connected to an operating console. Page 2, paragraph [0027]; discloses that only example of the system includes a CT system or Computed Tomography, but could also refer to a MRI system or other products or systems), comprising the steps of:

providing said control unit of said computed tomography apparatus with remote access equipment allowing remote servicing of said installed medical imaging apparatus (Fig. 2, characters 9 and 10, paragraph 3; disclose that the system includes remote access equipment for allowing the remote servicing of the installed medical apparatus.

Page 2, paragraph [0018]; discloses that the purposes of this is to allow for remote site management capable of providing timely and efficient maintenance services even when a system includes machines that are not covered by maintenance services);

removably connecting a device to said control unit of said computed tomography apparatus at said installation site to thereby also connect said device to said remote access equipment in said control unit (Fig. 1, character 103, paragraph 30; discloses the external device in this example case it is a gantry apparatus. Figure 2; discloses that the gantry apparatus has an interface to connect with the imaging apparatus. Page 3, paragraphs 41 and 42; discloses that the gantry apparatus is shown in the reference to be a separate device apart from the computer or operation console and can even be purchased from a separate vendor. From this it is shown that the external device or gantry apparatus is not one of the core components of the computer, and is considered to be a completely separate device, but is still usable in combination with the installed medical imaging apparatus since it can be connected to the computer and used in conjunction with the computer. This connection is considered to be temporary since it can be disconnected and reconnected when the system is upgraded); and

remotely servicing said device through said control unit and said remote access equipment of the installed computed tomography apparatus, only while said device is connected to said control unit (Fig. 2, characters 9, 10, and 103, paragraph 4; disclose that the external device is connected to the remote access equipment in the installed medical system and that the service provider is able to have access to this equipment to perform maintenance service).

While Shiraishi discloses a CT system it is not explicit as to what additional components can be included in such a system such as a power contrast agent injector or similar peripheral device that will not be used every single time. Further while it does disclose allowing for the updating of the various devices it fails to disclose updating known peripheral devices such as a power contrast agent injector.

Fratt, which talks about contrast injectors, teaches that the external device used in a computed tomography system can be a power contrast agent injector (Paragraph 4, heading Fact 3; teaches that the market for CT power injectors is growing due to new applications and procedures such as CT angiography, cardiac CT and perfusion imaging and that the faster the scanners are the more precise the delivery of contrast agent must be, from this it would have been obvious to exchange the external device used in the system provided by Shiraishi with a power contrast agent injector since it is one of many devices that could be used in conjunction with this system and would have to be monitored to ensure proper care and maintenance is observed. As stated above the system of Shiraishi is merely an example of one type of system with basic components since the goal of Shiraishi is to "provide a remote site management system capable of providing timely and efficient maintenance services even when a system includes machines that are not covered by maintenance services" it would have been obvious to extend the coverage and services to known CT devices such as a power contrast agent injector).

Therefore from this teaching of Fratt, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote

servicing of CT equipment provided by Shiraishi, with the use of power contrast agent injector in a CT system taught by Fratt, for the purpose of providing the users of the system with the newest and most up to date equipment. Shiraishi also mentions that the system can comprise a plurality of machines and uses the gantry apparatus as an example, it would have been obvious to exchange the external device used in the system provided by Shiraishi with a power contrast agent injector since it is one of many devices that could be used in conjunction with this system and would have to be monitored to ensure proper care and maintenance is observed.

The combination of Shiraishi and Fratt fails to explicitly disclose updating known peripheral devices.

Fichtner, which talks about automatic update of camera firmware, teaches updating the firmware of device and a host system (Col. 2, lines 24-39; teach that firmware is updated automatically upon connecting the device to the host system. In turn this simplifies operation for the user while ensuring compatibility between the device and host software, the intent is to provide "bug" fixes, enhancements to algorithms, and update protocols. Col. 1, lines 38-43; teaches that it is old and well known to update firmware on devices manually, however this is inconvenient and may lead to errors caused by incompatible versions of firmware and host system software. It would have been obvious to include this automatic update of peripheral devices such as imaging devices, in the combination of Shiraishi and Fratt, since while Shiraishi fails to explicitly disclose a power contrast agent, in view of Fratt it would have been obvious that a power contrast agent be included in the CT system of Shiraishi and updating

these devices would be crucial to maintain proper operation. As stated in Fichtner by doing this automatically through the host device it ensures that the versions of the software are compatible and work properly together).

Therefore from this teaching of Fichtner, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote servicing of CT equipment provided by the combination of Shiraishi and Fratt, with the use of update of peripheral devices as taught by Fichtner, for the purpose of ensuring the compatibility of the host system and the peripheral devices. As stated in Fichtner by doing this automatically through the host device it ensures that the versions of the software are compatible and work properly together.

As per claim 11, Shiraishi discloses a method for servicing a device used in combination with an installed computed tomography apparatus that comprises a plurality of components that permanently install said computed tomography apparatus at an installation site, and a control unit that operates the installed computed tomography apparatus (Paragraphs 1-4; disclose that the invention relates to a medical system and services external devices Figure 2, paragraphs 30-34; discloses that the medical imaging apparatus or computer comprises a plurality of permanently installed components where permanently installed refers to a component that is not easily removed, these components are RAM, CPU, ROM, HDD or hard drive with corresponding software. These components include a control unit which as described in the applicant's specification page 3, line 17, is the unit which allows communication with the remote location for servicing and maintenance, in this case the control unit is a

combination of the software located on the computer and the network interface that allows the computer to communicate with the remote location. Fig. 1, character 103, paragraph 30; discloses the external device in this example case it is a gantry apparatus. Figure 2; discloses that the gantry apparatus has an interface to connect with the imaging apparatus. Page 3, paragraph 42; discloses that the gantry apparatus is shown in the reference to be a separate device apart from the computer or operation console and can even be purchased from a separate vendor. From this it is shown that the external device or gantry apparatus is not one of the core components of the computer, and is considered to be a completely separate device, but is still usable in combination with the installed medical imaging apparatus since it can be connected to the computer and used in conjunction with the computer. Page 2, paragraph [0030]; discloses that the gantry is one unit attached to an X-ray device which the Examiner is construing to be a mounted imaging scanner the Gantry is also connected to an operating console. Page 2, paragraph [0027]; discloses that only example of the system includes a CT system or Computed Tomography, but could also refer to a MRI system or other products or systems), comprising the steps of:

establishing a communication link between said control unit of said installed computed tomography apparatus at said installation site and a service center remote from said installation site (Fig. 2, characters 9 and 10, paragraph 3; disclose that the system includes remote access equipment for allowing the remote servicing of the installed medical apparatus. Page 2, paragraph [0018]; discloses that the purposes of this is to allow for remote site management capable of providing timely and efficient

maintenance services even when a system includes machines that are not covered by maintenance services. Fig. 1, paragraph 3; disclose there is a communication link between the installed medical device and a service apparatus);

via said communication link, remotely servicing said installed computed tomography apparatus from said service center (Paragraph 3; discloses that the communication link is used to remotely service the installed medical apparatus. Fig. 2, characters 9 and 10, paragraph 3; disclose that the system includes remote access equipment for allowing the remote servicing of the installed medical apparatus. Page 2, paragraph [0018]; discloses that the purposes of this is to allow for remote site management capable of providing timely and efficient maintenance services even when a system includes machines that are not covered by maintenance services).

removably connecting said device agent injector to said control unit of said installed computed tomography apparatus and thereby routing said communication link through said control unit to said device (Fig. 1, character 103, paragraph 30; discloses the external device in this example case it is a gantry apparatus. Figure 2; discloses that the gantry apparatus has an interface to connect with the imaging apparatus. Page 3, paragraphs 41 and 42; discloses that the gantry apparatus is shown in the reference to be a separate device apart from the computer or operation console and can even be purchased from a separate vendor. From this it is shown that the external device or gantry apparatus is not one of the core components of the computer, and is considered to be a completely separate device, but is still usable in combination with the installed medical imaging apparatus since it can be connected to the computer and used in

conjunction with the computer. This connection is considered to be temporary since it can be disconnected and reconnected when the system is upgraded); and

remotely servicing said device from said service center through said communication link routed through said control unit, only while said device injector is connected to said control unit (Fig. 2, characters 9, 10, and 103, paragraph 4; disclose that the external device is connected to the remote access equipment in the installed medical system and that the service provider is able to have access to this equipment to perform maintenance service).

While Shiraishi discloses a CT system it is not explicit as to what additional components can be included in such a system such as a power contrast agent injector or similar peripheral device that will not be used every single time. Further while it does disclose allowing for the updating of the various devices it fails to disclose updating known peripheral devices such as a power contrast agent injector.

Fratt, which talks about contrast injectors, teaches that the external device used in a computed tomography system can be a power contrast agent injector (Paragraph 4, heading Fact 3; teaches that the market for CT power injectors is growing due to new applications and procedures such as CT angiography, cardiac CT and perfusion imaging and that the faster the scanners are the more precise the delivery of contrast agent must be, from this it would have been obvious to exchange the external device used in the system provided by Shiraishi with a power contrast agent injector since it is one of many devices that could be used in conjunction with this system and would have to be monitored to ensure proper care and maintenance is observed. As stated above

the system of Shiraishi is merely an example of one type of system with basic components since the goal of Shiraishi is to "provide a remote site management system capable of providing timely and efficient maintenance services even when a system includes machines that are not covered by maintenance services" it would have been obvious to extend the coverage and services to known CT devices such as a power contrast agent injector).

Therefore from this teaching of Fratt, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote servicing of CT equipment provided by Shiraishi, with the use of power contrast agent injector in a CT system taught by Fratt, for the purpose of providing the users of the system with the newest and most up to date equipment. Shiraishi also mentions that the system can comprise a plurality of machines and uses the gantry apparatus as an example, it would have been obvious to exchange the external device used in the system provided by Shiraishi with a power contrast agent injector since it is one of many devices that could be used in conjunction with this system and would have to be monitored to ensure proper care and maintenance is observed.

The combination of Shiraishi and Fratt fails to explicitly disclose updating known peripheral devices.

Fichtner, which talks about automatic update of camera firmware, teaches updating the firmware of device and a host system (Col. 2, lines 24-39; teach that firmware is updated automatically upon connecting the device to the host system. In turn this simplifies operation for the user while ensuring compatibility between the

device and host software, the intent is to provide "bug" fixes, enhancements to algorithms, and update protocols. Col. 1, lines 38-43; teaches that it is old and well known to update firmware on devices manually, however this is inconvenient and may lead to errors caused by incompatible versions of firmware and host system software. It would have been obvious to include this automatic update of peripheral devices such as imaging devices, in the combination of Shiraishi and Fratt, since while Shiraishi fails to explicitly disclose a power contrast agent, in view of Fratt it would have been obvious that a power contrast agent be included in the CT system of Shiraishi and updating these devices would be crucial to maintain proper operation. As stated in Fichtner by doing this automatically through the host device it ensures that the versions of the software are compatible and work properly together).

Therefore from this teaching of Fichtner, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote servicing of CT equipment provided by the combination of Shiraishi and Fratt, with the use of update of peripheral devices as taught by Fichtner, for the purpose of ensuring the compatibility of the host system and the peripheral devices. As stated in Fichtner by doing this automatically through the host device it ensures that the versions of the software are compatible and work properly together.

As per claim 12, Shiraishi discloses a method for charging for servicing of a device used in combination with an installed computed tomography apparatus that comprises a plurality of components that permanently install said computed tomography apparatus at an installation site, and a control unit that operates the installed computed

tomography apparatus (Paragraphs 1-4; disclose that the invention relates to a medical apparatus and services external devices Figure 2, paragraphs 30-34; discloses that the medical imaging apparatus or computer comprises a plurality of permanently installed components where permanently installed refers to a component that is not easily removed, these components are RAM, CPU, ROM, HDD or hard drive with corresponding software. These components include a control unit which as described in the applicant's specification page 3, line 17, is the unit which allows communication with the remote location for servicing and maintenance, in this case the control unit is a combination of the software located on the computer and the network interface that allows the computer to communicate with the remote location. Fig. 1, character 103, paragraph 30; discloses the external device in this example case it is a gantry apparatus. Figure 2; discloses that the gantry apparatus has an interface to connect with the imaging apparatus. Page 3, paragraph 42; discloses that the gantry apparatus is shown in the reference to be a separate device apart from the computer or operation console and can even be purchased from a separate vendor. From this it is shown that the external device or gantry apparatus is not one of the core components of the computer, and is considered to be a completely separate device, but is still usable in combination with the installed medical imaging apparatus since it can be connected to the computer and used in conjunction with the computer. Page 2, paragraph [0030]; discloses that the gantry is one unit attached to an X-ray device which the Examiner is construing to be a mounted imaging scanner the Gantry is also connected to an operating console. Page 2, paragraph [0027]; discloses that only example of the system

includes a CT system or Computed Tomography, but could also refer to a MRI system or other products or systems), comprising the steps of:

installing said computed tomography apparatus, manufactured by a first manufacturer, at said installation site (Fig. 1, paragraphs 1-4, 42; disclose the installing of medical apparatus manufactured by a first manufacturer);

providing said control unit of said installed computed tomography apparatus with remote access equipment allowing said control unit to communicate with a service center located remote from said installation site for remote servicing of said installed computed tomography apparatus (Fig. 2, characters 9 and 10, paragraph 3; disclose remote access equipment that allow the medical apparatus to communicate with a service center. Page 2, paragraph [0018]; discloses that the purposes of this is to allow for remote site management capable of providing timely and efficient maintenance services even when a system includes machines that are not covered by maintenance services. Fig. 1, paragraph 3; disclose there is a communication link between the installed medical device and a service apparatus);

removably connecting said device, manufactured by a second manufacturer, to said control unit and thereby establishing communication, through said remote access equipment of said control unit, between said device and said remote center, and thereby remotely servicing said device through said control unit, only which said device is connected to said control unit (Fig. 1, character 103, paragraph 30; discloses the external device in this example case it is a gantry apparatus. Figure 2; discloses that the gantry apparatus has an interface to connect with the imaging apparatus. Page 3,

paragraphs 41 and 42; discloses that the gantry apparatus is shown in the reference to be a separate device apart from the computer or operation console and can even be purchased from a separate vendor. From this it is shown that the external device or gantry apparatus is not one of the core components of the computer, and is considered to be a completely separate device, but is still usable in combination with the installed medical imaging apparatus since it can be connected to the computer and used in conjunction with the computer. This connection is considered to be temporary since it can be disconnected and reconnected when the system is upgraded. Fig. 2, characters 9, 10, and 103, paragraph 4; disclose that the external device is connected to the remote access equipment in the installed medical system and that the service provider is able to have access to this equipment to perform maintenance service) and

imposing a monetary charge from said first manufacturer to said second manufacturer dependent on said remote servicing of said device (Paragraph 2 and 58; disclose that the service provider imposes a monetary charge for a service contract and states that the contract is negotiated with the customer and checked before services are rendered).

Shiraishi fails to explicitly disclose wherein the imposing of the monetary charge is by said first manufacturer to said second manufacturer dependent on said remote servicing of said external device. The Examiner however asserts that it would have been obvious given the definition of the term contract (from www.dictionary.com that's that a contract is an agreement between two or more parties for the doing or not doing of something specified) that the first manufacturer would charge the second

manufacturer for any services they agreed upon. The contract mentioned in paragraph 2 of Shiraishi states that the contract is between a customer since this is a maintenance agreement the manufacturer of the external device could have an agreement with the service provider that if services are performed on their device that they are to be charged the appropriate fee. The service provider mentioned in Shiraishi would need to have access to the component equipment and maintain this equipment to ensure that the entire system is working properly as mentioned in paragraph 4, and would not want to perform maintenance and updates to external devices that are not covered under the hospitals service agreement without having an agreement with the second vendor to get paid for services performed.

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to include imposing a charge to a second manufacturer of an external device in the system provided by Shiraishi, for the purpose of ensuring that the service provider is not doing maintenance and upgrades to parts of the system for free. The service provider mentioned in Shiraishi would need to have access to the component equipment and maintain this equipment to ensure that the entire system is working properly as mentioned in paragraph 4, and would not want to perform maintenance and updates to external devices that are not covered under the hospitals service agreement without having an agreement with the second vendor to get paid for services performed.

While Shiraishi discloses a CT system it is not explicit as to what additional components can be included in such a system such as a power contrast agent injector

or similar peripheral device that will not be used every single time. Further while it does disclose allowing for the updating of the various devices it fails to disclose updating known peripheral devices such as a power contrast agent injector.

Fratt, which talks about contrast injectors, teaches that the external device used in a computed tomography system can be a power contrast agent injector (Paragraph 4, heading Fact 3; teaches that the market for CT power injectors is growing due to new applications and procedures such as CT angiography, cardiac CT and perfusion imaging and that the faster the scanners are the more precise the delivery of contrast agent must be, from this it would have been obvious to exchange the external device used in the system provided by Shiraishi with a power contrast agent injector since it is one of many devices that could be used in conjunction with this system and would have to be monitored to ensure proper care and maintenance is observed. As stated above the system of Shiraishi is merely an example of one type of system with basic components since the goal of Shiraishi is to "provide a remote site management system capable of providing timely and efficient maintenance services even when a system includes machines that are not covered by maintenance services" it would have been obvious to extend the coverage and services to known CT devices such as a power contrast agent injector).

Therefore from this teaching of Fratt, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote servicing of CT equipment provided by Shiraishi, with the use of power contrast agent injector in a CT system taught by Fratt, for the purpose of providing the users of the

system with the newest and most up to date equipment. Shiraishi also mentions that the system can comprise a plurality of machines and uses the gantry apparatus as an example, it would have been obvious to exchange the external device used in the system provided by Shiraishi with a power contrast agent injector since it is one of many devices that could be used in conjunction with this system and would have to be monitored to ensure proper care and maintenance is observed.

The combination of Shiraishi and Fratt fails to explicitly disclose updating known peripheral devices.

Fichtner, which talks about automatic update of camera firmware, teaches updating the firmware of device and a host system (Col. 2, lines 24-39; teach that firmware is updated automatically upon connecting the device to the host system. In turn this simplifies operation for the user while ensuring compatibility between the device and host software, the intent is to provide "bug" fixes, enhancements to algorithms, and update protocols. Col. 1, lines 38-43; teaches that it is old and well known to update firmware on devices manually, however this is inconvenient and may lead to errors caused by incompatible versions of firmware and host system software. It would have been obvious to include this automatic update of peripheral devices such as imaging devices, in the combination of Shiraishi and Fratt, since while Shiraishi fails to explicitly disclose a power contrast agent, in view of Fratt it would have been obvious that a power contrast agent be included in the CT system of Shiraishi and updating these devices would be crucial to maintain proper operation. As stated in Fichtner by

doing this automatically through the host device it ensures that the versions of the software are compatible and work properly together).

Therefore from this teaching of Fichtner, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote servicing of CT equipment provided by the combination of Shiraishi and Fratt, with the use of update of peripheral devices as taught by Fichtner, for the purpose of ensuring the compatibility of the host system and the peripheral devices. As stated in Fichtner by doing this automatically through the host device it ensures that the versions of the software are compatible and work properly together.

5. Claims 3 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi (US 2003/0050792), in view of Fratt, further in view of Fichtner et al. (US 6,360,362 B1) hereafter Fichtner, further in view of Bonissone et al. (6,609,217).

As per claims 3 and 13-15, the combination of Shiraishi, Fratt, and Fichtner discloses the above-enclosed invention; but fails to explicitly disclose wherein said control unit comprises security protection that isolates said power contrast agent injector from components of said installed computed tomography apparatus that are not involved in the remote servicing of the power contrast agent injector.

Bonissone et al., which talks about a system and method for diagnosing and validating a machine over a network using waveform data, teaches wherein said control unit comprises security protecting for isolating said external device at least from permanently installed components of said installed medical imaging apparatus that are

not involved in the remote servicing of the external device (Col. 15, lines 46-67, Col. 16, lines 1-9; teaches that the system incorporates a firewall for security and to isolate the communications from the external devices being monitored from the rest of the traffic on the network, this security is necessary in any corporate or business environment so that information that is deemed important or confidential is not accessible from the outside or unauthorized users).

Therefore from this teaching of Bonissone et al., it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote servicing of CT equipment provided by the combination of Shiraishi, Fratt, and Fichtner, with the use of a firewall in the medical system taught by Bonissone et al., for the purpose of security. This security is necessary in any corporate or business environment so that information that is deemed important or confidential is not accessible from the outside or unauthorized users.

6. **Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi (US 2003/0050792), in view of Fratt, further in view of Fichtner et al. (US 6,360,362 B1) hereafter Fichtner, further in view of Bonissone et al. (6,609,217), further in view of Dell: www.dell.com (June 10, 2002) hereafter Dell.**

As per claim 4, the combination of Shiraishi, Fratt, Fichtner and Bonissone et al. teaches the above-enclosed invention, Bonissone et al. teaches the use of a firewall for security but fails to explicitly disclose if the firewall is hardware or software.

Dell, which talks about components that can be installed in a system, teaches wherein said security protection comprises security hardware (Page 17, Under

FireWall/Security/VPN, Page 22; teaches that firewalls can be in the form of hardware usable in a system).

Therefore from this teaching of Dell, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote servicing of CT equipment that includes a firewall for security provided by the combination of Shiraishi, Fratt, Fichtner and Bonissone et al., with the use of a hardware version of a firewall system taught by Dell, for the purpose of a dedicated piece of hardware, which would ease the burden of computing power off of the other computing devices in the system. Hardware firewalls have been known to be faster and more secure than their software alternatives.

As per claim 5, the combination of Shiraishi, Fratt, Fichtner and Bonissone et al. teaches the above-enclosed invention, Bonissone et al. teaches the use of a firewall for security but fails to explicitly disclose if the firewall is hardware or software.

Dell, which talks about components that can be installed in a system, teaches wherein said security protection comprises security software (Page 17, Under FireWall/Security/VPN, Page 19; teaches that firewalls can be in the form of software usable in a system).

Therefore from this teaching of Dell, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote servicing of CT equipment that includes a firewall for security provided by the combination of Shiraishi, Fratt, Fichtner and Bonissone et al., with the use of a software version of a firewall system taught by Dell, for the purpose of providing the user with an

adequate security protection, with minimum change in the network setup and less over all cost. With a software firewall there is no need for extra hardware to be purchase or maintained just for the software to be installed on an existing system.

7. Claims 6, 7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi (US 2003/0050792), in view of Fratt, further in view of Fichtner et al. (US 6,360,362 B1) hereafter Fichtner, further in view of Dell.

As per claims 6, 7, 9 and 10, the combination of Shiraishi, Fratt and Fichtner discloses the above-enclosed invention, Shiraishi discloses having a remote access interface, but fails to explicitly disclose whether it is an original or retrofitted component.

However, the Examiner asserts that when constructing a network certain components are required, such as remote access interfaces. Dell teaches that it is old and well known to purchase network cards and modems as either original or retrofitted components for a system (Pages 3-14; teaches that there are many components that can be optional when setting up an original system Pages 7-8; teaches that remote management cards Network Adapter cards and modems are all optional equipment that can be purchased and installed when the system is originally built. Page 24; teaches that networking products such as network adapters and modems can be purchased after the original equipment is set up. Customers would rather have the equipment installed original if available because it saves them time and resources, since they would have to buy the products separately and have them installed. Although the option of retrofitting components is useful for systems that may not have a need for this hardware, for example if the service was not available or was thought to not have been

useful at the time, this can save them money on the initial building of the system. As the customer's needs change the equipment needs to be installed or upgraded. Even if the customer had a network adapter or modem installed in their original system they may have a desire at a future date to upgrade that equipment at a later date which advancements in hardware become available).

Therefore from this teaching of Dell, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the remote servicing of CT equipment provided by the combination of Shiraishi, Fratt and Fichtner, with the use of originally installed or retrofitted components taught by Dell, to provide their customers flexibility. Customers would rather have the equipment installed original if available because it saves them time and resources, since they would have to buy the products separately and have them installed. Although the option of retrofitting components is useful for systems that may not have a need for this hardware, for example if the service was not available or was thought to not have been useful at the time, this can save them money on the initial building of the system. As the customer's needs change the equipment needs to be installed or upgraded. Even if the customer had a network adapter or modem installed in their original system they may have a desire at a future date to upgrade that equipment at a later date which advancements in hardware become available.

Response to Arguments

8. Applicant's arguments filed February 26, 2010 have been fully considered but they are not persuasive.

9. Applicant's arguments with respect to claims 1 and 3-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL R. FISHER whose telephone number is (571)270-5097. The examiner can normally be reached on Mon/Fri [8am/4:30pm].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janice Mooneyham can be reached on (571)272-6805. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. R. F./
Examiner, Art Unit 3689

/Dennis Ruhl/

Primary Examiner, Art Unit 3689